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SOME NEW BEETLES IN THE FAMILIES OSTOMIDÆ
(TROGOSITIDÆ) AND CLERIDÆ FROM
CALIFORNIA.

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OSTOMIDÆ (TROGOSITIDÆ)

The genus *Nemosoma* Latr., has generally been misunderstood by American Coleopterists, chiefly from the fact that the two species, *parallelus* Melsh. and *cylindricum* Lec., have so long stood as our representatives of the genus. These we now know are quite dissimilar from true *Nemosoma* as represented by the European *N. elongatum* Linn., the species upon which Latreille founded the genus, and in fact belong in another genus. The recently described *Pseudalindria fissiceps* Fall, as pointed out by Mr. Charles Schaeffer, is however, a true member of the genus. A new species in my own collection also belongs here. The other species, *parallelus* Melsh., *cylindricum* Lec., *caviceps* Fall, and one new one belong in the genus *Corticotomus* Sharp, a genus founded upon the Guatemalan species, *C. basalis* Sharp. One other Central American species, *C. gracilis* Sharp from Panama has also been described.

Nemosoma is a small genus containing, so far as I know, one species in Europe, two in the Caucasus, one in the West Indies, two in California, one in Central America, and one or more in South America. The beetles are elongated and often very prettily marked and they live in forest trees, chiefly coniferous, and roam around in the tunnels of the Scolytidæ or bark borers, upon the eggs and larvæ of which they and their larvæ no doubt feed.

Corticotomus contains but the two species in Central America, the two in eastern North America, and two in western North America. They resemble very closely in shape and habits, the members of the preceding genus and two of them are similarly ornamented.

KEY TO THE NORTH AMERICAN SPECIES OF THE TWO GENERA.

- Head deeply triangularly emarginate and impressed at apex, mandibles deflexedgenus *Nemosoma* Latr.
 Black with pronotum and base of elytra rufous, larger and stouter, about five times as long as broad (Cal.)*fissiceps* Fall.
 Black with base of elytra rufous, smaller and more linear, about six times as long as broad (Cal.)*attenuatum* n. sp.
- Head not triangularly emarginate and impressed at apex, mandibles upliftedgenus *Corticotomus* Sharp.
- Front quite flat, head scarcely impressed behind.
- Piceous with base of elytra and often apex rufescent (Eastern States)*cylindricus* Lec.
 Rufous or castaneous throughout, with legs and antennæ somewhat lighter.
- With elytral intervals impunctate (Cal.)*californicus* n. sp.
 With elytral intervals distinctly punctate (Atlantic States).
parallelus Melsh.
- Front broadly concave, head transversely impressed posteriorly (Ariz., N. Mex., Col., Cal.)*caviceps* Fall.

Nemosoma Lat. Nouv. Dict. d'Hist. Nat., 1st ed., XXIV, Tab. Meth., p. 157, 1807; *Nemosoma* Latr. Gen. Crust. et Insect., 1809; *Pseudalindria* Fall. Trans. Am. Ent. Soc., XXXVI, No. 2, p. 126, 1910.

N. fissiceps Fall. *Pseudalindria fissiceps* Fall, Trans. Am. Ent. Soc., XXXVI, No. 2, p. 126, 1910.

This species seems to be confined to the Sierra Nevada Mountains of California. The specimens upon which the original description was based, were caught by myself in the early spring of 1898 at Forest Hill, Placer County, flying about woodpiles, presumably of Douglas fir (*Pseudotsuga taxifolia* Britt.) though some yellow pine (*Pinus ponderosa* Laws) might have been present. Mr. Ralph Hopping has captured four specimens in the mountains of Fresno Co., on yellow pine. I know of but one other specimen, in the collection of Dr. George Horn.

N. attenuatum n. sp. Form very narrow, attenuated, cylindrical, moderately shining, black with slight bluish lustre to upper surface; an oblique patch extending inwards from the humeri, the antennæ and tarsi rufous. Antennæ extending backwards just beyond margin of head, first joint moderate in size, joints 2-8 small and short, gradually wider externally and subequal in length to club, club robust and over twice as wide as eighth joint. Head elongate, about twice as long as wide, slightly divergent forwards to eyes where wider than either thorax or elytra; eyes moderate in size, rather flat and placed anterior to middle. Epistoma deeply triangularly emarginate and impressed, front with a longitudinal impressed line; surface rather finely punctured with elongated punctures anteriorly and with coarse sparser and rounder punctures posteriorly. Prothorax subequal in length to head, narrower posteriorly than elytra, gradually divergent forwards to head where of same breadth as base of head and elytra, base broadly arcuate and apex truncate, disc evenly convex, sparsely and finely punctured, more finely than on head, side margin fine. Elytra about as wide as apex of prothorax, over three times as long as wide and slightly longer than head and prothorax together; punctuation fine and sparse and with tendency to serial arrangement only near suture; disc without trace of striæ, a short rather deep linear impression without suture on apical depression. Head beneath and prosternum with a few coarse punctures, metasternum and abdomen finely and sparsely punctulate.

Length 4 mm., breadth, .75 mm.

Type in my own collection. Paratype sent to U. S. National Museum.

Described from a small series, collected by myself and beaten from dead boughs of Monterey Pine (*Pinus radiata* Don.) at Carmel, Cal., May 19, 1913. A few other specimens have since been secured by my friend, L. S. Slevin, at the same place. This species varies from .5 mm. smaller to .5 mm. longer than type.

It is related to *N. fissiceps* Fall but can be readily separated by its smaller size, more attenuated form, and by the fact that the thorax, femur and tibiæ are black whereas they are rufous in the other.

Corticotomus Sharp. *Biolog. Centr. Am. Insecta*, Col. II, part I, page 390, Sept. 1891.

C. cylindricus Lec. *Nemosoma cylindricum* Lec., *Smith. Misc. Coll.*, Vol. VI, p. 65 (1863-65).

This species superficially resembles the preceding two, but can be readily separated by the characters of the head. From *C. caviceps* Fall, which it more closely resembles, it can be separated by the form of the head and by the elytral striæ being distinct to the apex. It is apparently fairly well distributed in the eastern states but scarce.

C. californicus n. sp. Form narrow, elongated, convex, but slightly shining, rufous, with antennæ and legs lighter than the body. Antennæ extending backwards just beyond margin of head, first joint moderate, joints 2-8 small and short, gradually wider externally and subequal in length to club, club robust and about twice as wide as eighth joint. Head elongate (excluding mandibles), broader than long, just perceptibly convex at sides, at eyes but slightly wider than thorax or elytra; eyes moderate and not prominent and situated anterior to middle. Front triangularly flattened and with shallow fovea at apex above and transversely impressed at junction with clypeus, surface moderately finely and sparsely punctured. Prothorax about $\frac{1}{4}$ longer than head, as wide posteriorly as base of elytra, thence gradually divergent forwards where just perceptibly broader than base of head, base broadly arcuate, apex truncate, disc finely and sparsely punctate anteriorly, punctures but vaguely indicated posteriorly, side margin fine. Elytra as wide at base as base of thorax, with straight sides which are just perceptibly divergent to near apex where broadly rounded, about three times as long as broad and considerably longer than head and thorax together, with striæ faintly impressed and punctured for basal three fourths with double series in close apposition, of faint, elongate, punctures, apical declivity without distinct impression. Head beneath and prosternum with a few fine punctures, metasternum and abdomen practically smooth.

Length, 3 mm., breadth, .7 mm.

Type in my own collection. Paratype sent to U. S. Nat. Mus. Type locality, Carrville, Trinity County, Cal.

Described from a small series of specimens collected by myself, by beating the dead boughs of Western Yellow Pine (*Pinus ponderosa* Dougl.), near Carrville, Trinity Co., Cal., in June, 1913, and at McCloud, Siskiyou County, Cal., July 1, 1914.

This species varies but little in size though somewhat in color, the more mature having the pronotum and apical portion of the elytra darker. It is probably closely related to *parallelus* Melsh., but evidently distinct by the characters given.

C. parallelus Melsh. ?*Rhizophagus parallelus* Melsh., Proc. Acad. Phil., II, p. 108.

This species, which is found in the Atlantic States, under the bark of coniferous trees, is apparently rare. It seems from the description, for I lack a specimen, to closely resemble *californicus*. It can, however, be separated from that by the distinctly punctate elytral intervals.

C. caviceps Fall. *Nemosoma caviceps* Fall, Am. Ent. Soc., XXXVI, No. 2 (1910), p. 127.

This species is closely related to the eastern *C. cylindricus* Lec. but easily separated by the characters of the head and the fact that the elytral striæ are only evident basally, whereas in the latter, they are distinct to the apex. Found on the Huachuca Mountains, Arizona—9,000 feet (type locality); Las Vegas, Hot Springs, New Mexico (Barber and Schwarz); Colorado (Champlain); high Southern Sierras of Mariposa County on Sugar Pine (*Pinus lambertiana* Dougl.) (Hopping), Glenn County (Hopping), Trinity County (Hopping), Trinity Mts., near Carrville at over 7,000 feet alt. (myself). My specimens were beaten from western yellow pine (*Pinus ponderosa* Dougl.). One of my specimens was compared with the type by Fall and pronounced not to "differ in any appreciable way from my type of *N. caviceps*. The serial punctures on the elytra are just visibly larger in the type, but that is about all."

CLERIDÆ.

Enoclerus cupressi n. sp. Black, elytra with faint bluish sheen and with triangular orange red maculation at humeri and broad transverse bar of same color at middle, the latter not meeting at

suture though close at its posterior border, a wedge of black separating the two portions, but reaching the side margin and extending in a narrow band forwards along the margin to humeral spots. Abdomen rufous. Slightly shining. Head, pronotum and elytra with moderate covering of rather long erect black hair and with a shorter and denser semi-erect black pile beneath, this latter changing to white on the red areas, legs and under side with a sparse covering of long gray hair, and a transverse bar of short gray pubescence near apex of elytra, this extending backwards along suture to apex. Head including the eyes, narrower than the thorax, moderately closely and coarsely punctured. Thorax about as broad as long, narrower than the elytra, disc rather finely, closely and rugosely punctured. Elytra about twice as long as broad, with prominent humeri, sides straight and parallel to beyond middle, then gradually rounded to truncate apex, surface granulate, punctures very fine on black areas, coarse and sparse on red. Beneath rather coarsely and sparsely punctured forwards and very finely on abdomen.

Length 7 mm., breadth, 2.5 mm.

Type in my own collection.

Type locality Carmel, Monterey County, Cal.

Beaten from the Monterey cypress (*Cupressus macrocarpa* Gord.), by Mr. L. S. Slevin. Also beaten from Sargent's cypress (*Cupressus sargentii* Jepson), on Cypress Ridge, near Fairfax, Marin Co., Cal., by myself. Ten specimens have been seen. This beetle no doubt lives both in the larval and adult stage upon the bark beetles, particularly *Phloeosinus cupressi* Hopk., and their larvæ.

There is a slight amount of variation in the color pattern as is usual. The median red markings almost meet in one specimen. It resembles superficially *Enoclerus eximius* Mann. It however is, in general, proportionately broader and stouter, with sides of elytra more parallel, the surface generally rougher though with the punctures less evidently defined except on the red patches, the black color of the elytra of a bluish black instead of a coal black, the markings of a richer orange red and the median patches not meeting at the suture as is the general rule in the other, where they not only meet but send an extension backwards along the

suture, by the longer as well as the shorter hair of the thorax being inky black instead of the shorter gray, and by the general surface of the body being covered with a denser covering of hair, both short and long. *Eximius* also has a different life, being found exclusively upon the soft wood trees, such as the California laurel (*Umbellularia californica* Nutt.), the willow, the alder and the wax myrtle, and living, so far as I have observed, exclusively upon the Ptinidæ.

Hydnocera quadrimaculata n. sp. Black, moderately shining; antennæ except outer part of club, inner surface of anterior tibia and first tarsal joint and femur at junction with trochanter, and four elytral maculations, yellow; body very hairy. Head as broad as elytra at base, densely, finely rugose, front not impressed, clothed with sparse, moderately long, brownish black, erect hair. Thorax slightly narrower than the head, broader than long, rather finely, rugosely punctate, sides moderately and regularly dilated anterior to middle, pubescence like that of head only longer, intermixed with sparse shorter coat of ashy pubescence. Elytra but little shorter than the abdomen, about two and one quarter times as long as broad, sides nearly parallel, apices oblique on outer part and separately rounded near suture; humeri distinct; disc feebly convex; suture strongly depressed at base; surface with a greenish lustre, the anterior yellow maculations just back of base and less distinct, the posterior just back of middle, more or less circular and distinct, rather coarsely and posteriorly confluent punctured, an oblique depression running from humeri inwards and a more circular one just posterior to posterior maculation, pile on anterior half similar to that of thorax and on posterior half much shorter. Underside and legs more shining, with more of a greenish luster, more finely and sparsely punctured, and clothed with longer, erect and shorter semi-erect ashen pile.

Length, 5.5 mm., breadth, 1.5 mm.

Type in my own collection, a unique collected near San Diego, Cal., July 4, 1914, by Mr. E. P. Van Duzee and kindly presented to me.

This species can be easily separated from any of our other western species by its size and markings.

Galeruclerus trilobatus n. sp. Elongate, rufous, elytra a deep metallic blue, sides of meso- and metasternum and abdomen black, three outer joints of antennæ piceous; shining, moderately pubescent above, the hair erect and moderately long, antennæ eleven jointed, first joint of moderate size, second smaller, longer than broad and but slightly broader than third, third to ninth small and of same breadth but of gradually diminishing length, seventh, eighth and ninth transverse, ninth and tenth large and triangular, longer than broad, together as long as joints 2-9, eleventh two thirds as long as two preceding, oval with apex slightly constricted. Head grossly moderately, densely punctured, a slight depression on front between eyes, eyes prominent. Thorax longer than broad; about as broad at base as apex; sides with basal portion almost parallel though with slight constriction anteriorly, a broadly dilated and lobed median portion, and with a narrower, though slightly lobed apical portion; disc convex, punctured like head, with slight broad longitudinal depression near middle, base margined. Elytra about three times as long as broad, base slightly broader than thorax, gradually though slightly broader posteriorly, sides almost straight, apex conjointly rounded; very coarsely, deeply punctate, punctures arranged in irregular rows. Body beneath sparsely, finely punctured, and with few short prostrate hairs.

Length, 7 mm., breadth, 1.5 mm.

Type in my own collection.

- This attractive beetle, a unique, was collected by myself, in the cañon of the south fork of the Kings River, Cal., at an altitude of about 5,000 feet, July 5, 1910. It was swept from the herbage near the river. A second specimen, smaller and less typical, with the elytra less bluish and the thorax less trilobed, but with the pile finer and denser than in *fasciata* and as in my specimen, is in the collection of Mr. H. F. Fall. It was collected in the San Bernardino Mts.

It can be readily separated from all others in our fauna by its striking color. Structurally, it somewhat resembles *G. (Cregya) fasciata* Lec., but it has the sides of the thorax more definitely trilobed, the punctures of the elytra less serially arranged and the

series less well spaced, and the smaller joints of the antennæ proportionately much shorter than are those in *fasciata*. It has been suggested that this might be an extreme color phase of the last but aside from the size and characters just given, we find that as the specimens of *fasciata* get darker, the head, thorax and legs share the increase in pigmentation along with the elytra. In *trilobatus*, there is a very decided contrast between the clear rufous color of the head, thorax and legs, and the deep blue unicolorous elytra. *Fasciata* lives upon various Ptinidæ and presumably this species has similar habits.

DENDROTETTIX QUERCUS RILEY, AT YAPHANK, LONG ISLAND, N. Y.

BY WM. T. DAVIS, New Brighton, Staten Island, N. Y.

On September 3, 1912, a single male *Dendrotettix quercus* was collected at Yaphank, Long Island, N. Y. This is the first record from the State of New York of this sometimes very destructive grasshopper.

The insect was first described, but without a scientific name, by Lawrence Bruner, in Bulletin No. 13, U. S. Dept. of Agri., Div. of Entomology, in his report for 1886, printed in 1887, wherein he calls it "The Post Oak Locust of Washington County, Texas," and tells how by reason of its great numbers it had completely defoliated the trees of the forest. He also mentions the bright colors of the insect, its gaudy appearance and tells of its activity and shyness.

The species was next mentioned as *Dendrotettix quercus*, but without description, by Dr. Riley at the meeting of the Washington Entomological Society, held June 2, 1887, when he stated that he had reared it many years ago in Missouri through all of its stages. He adds: "The peculiarity of the genus is that as far as we know it is essentially tree-inhabiting."

The scientific name and description were first assembled by Dr. Packard who, in the Fifth Report of the U. S. Entomological